

Please enter the following **\*REQUIRED** information in the shaded areas:

\*Name \_\_\_\_\_

\*Address \_\_\_\_\_

\*Telephone Numbers: Work \_\_\_\_\_ Other \_\_\_\_\_

\*What license type is needed/held (check one)? A. Commercial B. Noncommercial C. Private

\*If you have a Utah pesticide applicator license, what is the number? \_\_\_\_\_

Social Security Number (for identification / OPTIONAL) \_\_\_\_\_

Answers to Pesticide Use Pretest: 1. A 2. C 3. B 4. D 5. B 6. D 7. A 8. D 9. B 10. A

## Pesticide Use Post Test: 20 Questions

**INSTRUCTIONS:** Indicate the single correct answer for each question by completely darkening the box to the left of the answer selected.

1. Which of the following includes examples of only vertebrate pests?

- ☐ A. Bacteria, nematodes, and fungi
- ☐ B. Aphids, ticks, and spiders
- ☐ C. Snails, slugs, and worms
- ☐ D. Birds, fish, and snakes

2. Which of the following includes examples of only microbial pests?

- ☐ A. Rats, mice, snakes, and fish
- ☐ B. Mollusks, mites, aphids, and slugs
- ☐ C. Clover, dandelions, knapweed, and thistle
- ☐ D. Mycoplasmas, viruses, fungi, and nematodes

3. Which of the following are all attributes of a pest that will assist in accurately identifying the pest?

- ☐ A. Population numbers, unacceptable threshold level, and environmental hazard
- ☐ B. Development, biology, physical features, and damage characteristics
- ☐ C. Biology, age, acceptable threshold level, and environmental hazard
- ☐ D. Development, age, emotional condition, and population numbers

4. Which of the following pest control goals is appropriate for rodents located in an indoor food preparation facility?

- ☐ A. Pest suppression
- ☐ B. Pest eradication
- ☐ C. Pest prevention
- ☐ D. Pest deterrence

5. Which of the following are all examples of cultural pest control strategies?

- ☐ A. Fertilizing, radiation, electricity, light, water, parasites, predators, pathogens, and birds
- ☐ B. Pruning and thinning, exhausting food or water supplies, and applying pheromones
- ☐ C. Applying pesticides, using heat or refrigeration, and setting up screens and fences
- ☐ D. Rotating crops, cultivating soil, varying planting and harvesting times, pruning

6. Which of the following statements correctly describes a pesticide formulation that is an emulsifiable concentrate?

- ☐ A. No further dilution is required and has low concentration of active ingredients
- ☐ B. Low drift hazard, slow release possible, does not stick to foliage, and hazard to birds
- ☐ C. Easily handled, transported, and stored, but high concentration makes it easy to over dose
- ☐ D. Easily measured, will not dissolve in water, requires constant agitation, and can clog nozzles

7. Which of the following adjuvants are appropriate for a spray application in which the herbicide must adhere to the surface of a plant and form a uniform coating over the leaves?

- ☐ A. Sticker and spreader
- ☐ B. Penetrant and sticker
- ☐ C. Emulsifier and penetrant
- ☐ D. Thickener and emulsifier

8. Which of the following pesticide formulations or applications is appropriate for the control of flying insects?

- ☐ A. Granules, pellets, and dust
- ☐ B. High pressure sprays or aerosols
- ☐ C. Low pressure sprays with coarse droplets
- ☐ D. Flowables and other non-emulsifiable concentrates

9. If all other variables remain unchanged, which of the following statements is true with respect to the adjustments of spray application equipment?

- ☐ A. Doubling the travel speed will double the spray application rate
- ☐ B. Doubling the spray pressure will double the spray application rate
- ☐ C. Doubling the travel speed will reduce the application rate by one-half
- ☐ D. Doubling the spray pressure will reduce the application rate by one-half

10. If all other variables remain unchanged, which of the following variables will result in the greatest increase in the application rate of spray equipment?

- ☐ A. Decreasing the spray pressure 25 percent
- ☐ B. Increasing the spray pressure 25 percent
- ☐ C. Decreasing the travel speed 25 percent
- ☐ D. Increasing the travel speed 25 percent

11. Calibration: Use the following formula to calculate equipment travel speed. If spray equipment travels 100 feet in 15 seconds, what is the travel speed in miles per hour (mph)?

- ☐ A. 0.1 mph
- ☐ B. 2.5. mph
- ☐ C. 4.5 mph
- ☐ D. 6.7 mph

$$\text{miles per hour} = \frac{(\text{distance in feet}) \times 60}{(\text{time in seconds}) \times 88}$$

12. Calibration: Use the following formula to calculate nozzle delivery rate in gallons per minute (gpm). Spray equipment with a boom should apply 20 gallons per acre (gpa) while traveling at 4 miles per hour (mph). If the nozzles on the boom are spaced 22 inches apart, how much spray should each nozzle deliver during 1 minute of operation?

- ☐ A. 0.3 gpm
- ☐ B. 0.6 gpm
- ☐ C. 0.9 gpm
- ☐ D. 1.2 gpm

$$\text{gpm} = \frac{(\text{gpa}) \times (\text{mph}) \times (\text{nozzle spacing in inches})}{5940}$$

13. Calibration: Use the following formula to calculate application rate in gallons per acre (gpa). The nozzles on a boom sprayer are 18 inches apart and each one delivers 0.4 gallons per minute (gpm). If the sprayer travels at 5 miles per hour (mph), what is the application rate in gallons per acre (gpa)?

- ☐ A. 9.6 gpa
- ☐ B. 14.2 gpa
- ☐ C. 19.8 gpa
- ☐ D. 26.4 gpa

$$\text{gpm} = \frac{(\text{gpa}) \times (\text{mph}) \times (\text{nozzle spacing in inches})}{5940}$$

**14. Calibration: Use the following formula to calculate the required travel speed in miles per hour (mph). The nozzles on a boom sprayer are 24 inches apart and each nozzle delivers 0.5 gallons per minute (gpm). If the equipment is to apply 15 gallons per (gpa), what travel speed is required in miles per hour (mph)?**

- ☐ A. 4.6 mph
- ☐ B. 8.3 mph
- ☐ C. 12.4 mph
- ☐ D. 16.5 mph

$$\text{gpm} = \frac{(\text{gpa}) \times (\text{mph}) \times (\text{nozzle spacing in inches})}{5940}$$

**15. Refer to the Tordon 22K label. What are the conditions under which Tordon 22K can be applied to residential or commercial lawns or near ornamental trees or shrubs?**

- ☐ A. Tordon 22K may be used for commercial applications, but not residential applications
- ☐ B. Tordon 22K may be used for residential applications, but not commercial applications
- ☐ C. Tordon 22K should not be applied to lawns or near ornamental trees or shrubs
- ☐ D. Tordon 22K may be applied at a rate not to exceed 1 quart per acre

**16. Refer to the Tordon 22K label. If another pesticide is to be sprayed from equipment used to apply Tordon 22K, what special clean-out procedure must be followed in addition to rinsing and flushing several times?**

- ☐ A. Rinse with diluted ammonia and allow solution to remain in equipment for several hours
- ☐ B. Flush the equipment using another pesticide formulation to dilute the Tordon 22K
- ☐ C. Catch and reuse the rinse water during the repeated flushing operations
- ☐ D. Allow equipment to stand empty overnight so it will dry

**17. Refer to the Tordon 22K label. Which of the following conditions will produce larger spray droplets and in turn reduce the drift potential for Tordon 22K?**

- ☐ A. Using low flow rate nozzles at higher spray pressures
- ☐ B. Using high flow rate nozzles at lower spray pressures
- ☐ C. Using high flow rate nozzles at higher spray pressures
- ☐ D. Flow rate of nozzles and spray pressure do not affect drift potential

**18. Refer to the Tordon 22K label. Which of the following wind conditions are less likely to produce wind drift?**

- ☐ A. Speeds that vary from no wind to 30 miles per hour in variable directions
- ☐ B. Wind speeds between 2 and 10 miles per hour
- ☐ C. Wind speeds between 9 and 18 miles per hour
- ☐ D. During a temperature inversion with no wind

**19. Refer to the Tordon 22K label. Which of the following conditions are less likely to result in pesticide drift potential?**

- ☐ A. Higher temperatures and lower humidity
- ☐ B. Higher temperatures and higher humidity
- ☐ C. Lower temperatures and higher humidity
- ☐ D. Lower temperatures and lower humidity

**20. Refer to the Tordon 22K label. When mixing Tordon 22K with water in a spray tank, what procedure must be followed to achieve proper mixing?**

- ☐ A. Tordon 22K must be added after the tank is full of water
- ☐ B. Tordon 22K must be added to the tank before any water is added
- ☐ C. Water in the tank must be agitated while Tordon 22K is added and agitation must continue while the tank is filled
- ☐ D. Water in the tank must be 85°F or higher while Tordon 22K is added and the temperature must be maintained during mixing

**When this post test is complete and scored, print and keep it, the pretest, and the worksheets, to be turned in to the Utah Department of Agriculture and Food.**